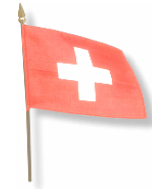


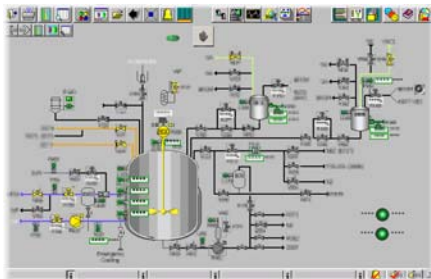
Case Study – R077 Upgrade Ciba Specialty Chemicals, Basel, Switzerland



When the people at Ciba Specialty Chemicals in Basel, Switzerland needed a systems integrator to implement a flexible, agile control system for a demanding new batch production facility, they relied on Alba to provide them with the solution they needed.

The Challenge

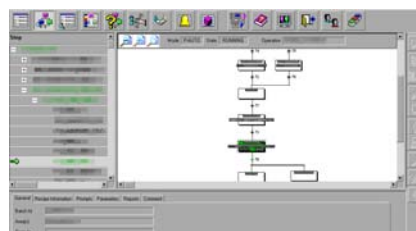
The scope of this project was a major upgrade of the automation of a multi-purpose distillation reactor and its associated equipment. From a mostly manual vessel, it was to be transformed into a fully automated, recipe-controlled unit through the addition of new equipment, mostly using remote I/O through Profibus, and an Emerson DeltaV Digital Automation System.



After the upgrade was complete, the reactor was initially earmarked to be used in the synthesis of one of Ciba's key products, a material used in DVD manufacture. The product is so successful, in fact, that the vast majority of all recordable DVDs in Europe are made with it – an accomplishment to which Alba is very proud of having contributed.

Besides manufacturing this market-leading product, however, one of the key requirements was that the control solution had to be agile enough to cope with a variety of products, hence the decision to use batch control. Not only was there a significant potential for future product development, but the different products could be manufactured in a myriad of different ways due to the versatility of the unit (rectification, distillation, vacuum, advanced heat control and temperature-controlled material dosing are just a few of the system's capabilities).

The unit's ability to make these future products was a key driver for the project, which was created not only to enable production of existing products like the highly successful DVD dye, but also for trialling small production runs of new low-volume,

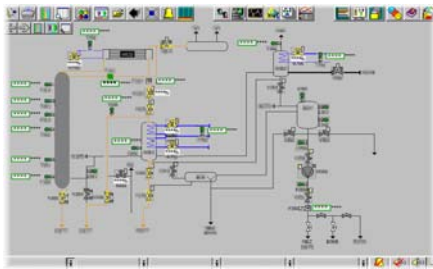


Projects

Project Review – R077 DeltaV Upgrade Ciba Specialty Chemicals, Switzerland

high-value products that might not be viable otherwise.

The ability to change over to new products quickly was crucial to their economic viability, so long development times and extended engineering support for each new product was not acceptable.



The Solution

The flexible design of DeltaV batch, based on the ISA S88 standard, allowed us to develop small, robust, reusable recipe elements that could be used repeatedly on different products. This empowered people like the operators and chemists working on product development to actively design and test recipes themselves, enabling them to get the best from the equipment directly. It also allowed them to play a much more active roll in development of new recipes.

The emphasis on production-led recipe development also made it easier and faster to trial new products, cutting costs and reducing time-to-market.

Another significant aspect of the project was the use of intrinsically



safe technologies,

such as Profibus PA and Gecma's Challenger operator stations, both of which Alba helped to install and commission.

The Bottom Line

Alba's new automation solution has



opened the plant up to a new range of production possibilities that were never available before.

Not only that, but our knowledge of OSIsoft's PI historian system allowed us to tie the system into the main Ciba PI server, allowing chemists, engineers and managers to see real-time process operational data on their desktop computers. This overall boost in productivity now allows for the faster development of more and better products.

Our skills and expertise, not to mention our broad range of software libraries, enable us to deliver an automation solution that is not only highly capable, but one that is customised and integrated to suit our customer's requirements.

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